

DECISION AND FINDINGS  
IN THE  
CONSISTENCY APPEAL OF  
VIEQUES MARINE LABORATORIES  
FROM AN OBJECTION BY THE  
PUERTO RICO PLANNING BOARD

May 28, 1996

(VIEQUES DECISION)

## SYNOPSIS

Vieques Marine Laboratories (Appellant) appealed to the Secretary of Commerce (Secretary) to override the Commonwealth of Puerto Rico's objection to its proposal to construct and operate a shrimp mariculture farm in the submerged lands and waters of Puerto Ferro Bay (the Bay) on the Island of Vieques (the Island or Vieques). This appeal arises under the Coastal Zone Management Act (CZMA), an act administered by the National Oceanic and Atmospheric Administration (NOAA), an agency within the Department of Commerce. Section 307 of the CZMA provides that any applicant for a required federal license to conduct an activity affecting any land or water use or natural resource of the coastal zone shall provide to the permitting agency a certification that the proposed activity complies with the enforceable policies of a state's coastal management program (CMP), including the Commonwealth of Puerto Rico's CMP.

Appellant has requested approval from the U.S. Army Corps of Engineers (Corps) for the project. Because Puerto Rico has objected to the project, the Corps may not grant a license or permit, unless the Secretary finds that the activity is consistent with the objectives of the CZMA or is otherwise necessary in the interest of national security.

### Factual Background

Appellant, a non-profit corporation chartered by the Commonwealth of Puerto Rico, wishes to operate a mariculture shrimp farm in the Bay, located on the southern coast of the Island. To accomplish this, Appellant plans to place floating cages anchored on the bottom on no more than five acres, 2 percent, of the Bay's area. The perimeter of this area would be outlined by mooring buoys, and a wooden dock for boat launching would also be constructed. The shrimp farm operation would involve the maintenance of approximately 37,500 pounds of a species of shrimp, exotic to the waters of the Bay, in the cages for each growing period of approximately 186 days.

Appellant applied to the Corps for a permit for the proposed project. In conjunction with that federal permit application, Appellant submitted a certification that its project is consistent with Puerto Rico's CMP.

On March 31, 1994, the Puerto Rico Planning Board (PRPB), the Commonwealth of Puerto Rico's coastal management agency, objected to Appellant's project on the ground that it is not consistent with the enforceable policies contained in Puerto Rico's CMP. In addition, PRPB stated its concern that the site of the proposed activity is located in territorial waters and submerged lands, which are in the public domain and under the jurisdiction of the Commonwealth of Puerto Rico's Department of Natural Resources. Of specific concern to PRPB is that Appellant's proposed project would jeopardize the ecological communities existing in the

proposed area as well as other systems close to the area, by virtue of introducing exotic species with their associated diseases, and would also affect the water quality of the Bay, by the increase of nutrients from food and animal waste resulting from the concentrated culture of shrimp. The PRPB also noted its concern that permitting this mariculture project, which would be the first in Puerto Rico, would set a precedent. The PRPB then presented the alternative of considering an upland site for the project and/or the conducting of a complete monitoring study.

Under the CZMA, PRPB's consistency objection precludes any federal agency from issuing any license or permit necessary for the proposed project, unless the Secretary finds that the activity is either consistent with the objectives or purposes of the CZMA (Ground I) or is necessary in the interest of national security (Ground II).

Appellant filed with the Department of Commerce a notice of appeal from PRPB's objection to its proposed project. Appellant argued that the project satisfies Ground I and Ground II. Upon consideration of the entire record, including submittals by Appellant and the PRPB, and written information from federal agencies, the Secretary made the following findings.

#### Threshold Issues

##### A. Project's Location Outside of the Coastal Zone

Appellant raised a threshold issue challenging PRPB's ability to object to the project, based on Appellant's belief that the waters of the Bay, which are surrounded by U.S. Naval Base Camp Garcia, are federal lands excluded from Puerto Rico's coastal zone.

The Secretary found that the submerged land of the Bay is not federal land excluded from the coastal zone. Because the Secretary concluded that the submerged land of the Bay is not federal land excluded from Puerto Rico's coastal zone, the Secretary did not need to address whether Appellant's activity otherwise would have effects on Puerto Rico's coastal resources and uses beyond the area at issue.

##### B. Incorrectness of the Bay's special status in the Puerto Rico CMP

Appellant also argued that for various reasons, the Bay should not be considered as a critical coastal wildlife area, nor should it be considered as a bioluminescent bay, nor should the Bay's waters be viewed as of the highest quality.

The Secretarial override process addresses neither a possible need to revise a state's coastal management program nor the issue of whether a state is complying with its federally-approved coastal management program.

C. Failure of PRPB to Comply with Specific Regulations

Appellant also alleged that PRPB failed to comply with certain CZMA regulations. With respect to certain of the regulations cited by Appellant, the Secretary found that these regulations envisioned and encouraged communication between the coastal management agency and an applicant for a federal permit but did not establish specific procedures for such communication. The Secretary also determined that the record revealed that the communications between the parties included at least one meeting while the consistency review was pending. The Secretary also concluded that Appellant had not provided factual information to support a claim that PRPB had violated the other regulations Appellant cited.

Ground I: The Proposed Project is Not Consistent with the Objectives or Purposes of the CZMA

To find that the proposed activity satisfies Ground I, the Secretary must determine that the project satisfies all four of the elements specified in the regulations implementing the CZMA (15 C.F.R. § 930.121). If the project fails to satisfy any one of the four elements, it is not consistent with the objectives or purposes of the CZMA and federal licenses or permits may not be granted.

The Secretary determined that Appellant's proposed project failed to satisfy Element 2 of Ground I. Based on all of the materials in the record, those submitted by Appellant, the PRPB and the federal agencies, the Secretary found that:

Appellant's proposed project will cause adverse effects on the natural resources of Puerto Rico's coastal zone through the introduction of additional nutrients resulting from shrimp feces and excess shrimp feed into the waters of Vieques;

Appellant's proposed project will cause adverse effects on the natural resources of Puerto Rico's coastal zone through the likely introduction of this exotic species of shrimp into the waters of Vieques;

Appellant's proposed project will cause adverse effects on the natural resources of Puerto Rico's coastal zone as a result of the shading of the benthic communities; and

because no other mariculture projects are reasonably foreseeable, cumulative adverse effects from Appellant's project are not likely.

The Secretary also concluded that, although Appellant's project would make a contribution to the national interest, that contribution would only be a limited one.

In balancing these factors, the Secretary found that the adverse coastal effects of the proposed activity will outweigh the activity's contribution to the national interest.

Because the Secretary concluded that Appellant's proposed project did not satisfy Element 2 of Ground I, it was unnecessary for the Secretary to consider the other three elements of Ground I.

Ground II: Necessary in the Interest of National Security

Appellant's argument that its project is necessary in the interest of national security is in essence that the U.S. Navy, the majority landholder on the Island, has a commitment to assist in economic development on the Island. It was in line with that commitment that the Navy agreed to lease the land necessary to Appellant to allow access to the Bay and for any necessary land-based activities to support the shrimp mariculture project.

The Secretary concluded that no national defense or other national security interest will be significantly impaired if Appellant is not allowed to proceed with its proposed activity. Accordingly, the Secretary found that the requirements for Ground II have not been met.

Conclusion

Because Appellant had satisfied neither Ground I nor Ground II of the statutory and regulatory requirements for an override of the Commonwealth of Puerto Rico's consistency objection, the Secretary declined to override that objection. Accordingly, the U.S. Army Corps of Engineers may not issue the necessary permit for the project.

## DECISION

Vieques Marine Laboratories (Appellant) appealed to the Secretary of Commerce (Secretary) to override the Commonwealth of Puerto Rico's objection to its proposal to construct and operate a shrimp mariculture farm in the submerged lands and waters of Puerto Ferro Bay (the Bay or Puerto Ferro) on the Island of Vieques (the Island or Vieques). This appeal arises under the consistency provisions of the Coastal Zone Management Act (CZMA), 16 U.S.C. § 1451 et seq., as amended 1972. CZMA is administered by the National Oceanic and Atmospheric Administration (NOAA), an agency within the Department of Commerce. Section 307 of the CZMA, 16 U.S.C. § 1456, provides that any applicant for a required federal license to conduct an activity affecting any land or water use or natural resource of the coastal zone shall provide to the permitting agency a certification that the proposed activity complies with the enforceable policies of a state's coastal management program (CMP), including the Commonwealth of Puerto Rico's CMP.

Appellant has requested approval from the U.S. Army Corps of Engineers (Corps) for the project. Because Puerto Rico has objected to the project, the Corps may not grant a license or permit, unless the Secretary finds that the activity is consistent with the objectives of the CZMA or is otherwise necessary in the interest of national security. 16 U.S.C. § 1456(c)(3)(A).

### I Factual Background

Appellant, a non-profit corporation chartered by the Commonwealth of Puerto Rico, wishes to operate a mariculture shrimp farm in the Bay, on the southern coast of the Island. To accomplish this, Appellant plans to place floating cages anchored on the bottom on no more than 5 acres, 2 percent, of the Bay's area. The perimeter of this area would be outlined by mooring buoys, and a wooden dock for boat launching would also be constructed. "Application for Certification of Consistency with the Puerto Rico Coastal Management Program" (Appellant's Certification), attached as Exhibit 1 to "Puerto Rico Planning Board's (PRPB)<sup>1</sup> Response to Mr. Charles Connelly (Director) Appeal", April 7, 1995 (PRPB Initial Brief). The shrimp farm operation would involve the maintenance of approximately 37,500 pounds of a species of penaeid shrimp, exotic to the waters of the Bay, in the cages for each growing period of approximately 186 days. Vieques Marine Laboratories: Shrimp Waste Statistics, attached as Exhibit 13 to "Vieques Marine Laboratories Shrimp Project" - Appellant's Exhibits", March 4, 1995 (Appellant's Initial Brief).

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<sup>1</sup> The PRPB is Puerto Rico's coastal management agency for purposes of overseeing Puerto Rico's federally-approved CMP.

Approximately two-thirds of the land on the Island is owned by the U.S. Department of the Navy (the Navy), part of the U.S. Department of Defense (DOD). All of the land surrounding the Bay is under Navy ownership. The Navy considers Vieques very important, because of its geographic location and varied terrain, as a training ground for members of the armed services.<sup>2</sup> However, Navy ownership of the bulk of the land forecloses many opportunities for economic development on the Island.<sup>3</sup> The opposition to the Navy presence on the Island led to litigation against DOD by the Commonwealth of Puerto Rico. As a result of this litigation, a Memorandum of Understanding Regarding the Island of Vieques (MOU) was signed by the Commonwealth and the Navy on October 11, 1983.<sup>4</sup>

In the MOU, the Navy committed itself to participate in any way possible to assist in economic development projects on the Island. MOU at pp. 1-2. It was in line with that commitment that the Navy agreed to lease the land necessary to Appellant to allow it access to the Bay and for any necessary land-based activities to support the shrimp mariculture project.<sup>5</sup>

This project is neither the Navy's nor Director's first involvement in developing a mariculture project on Vieques. In 1986, the President's Economic Adjustment Committee of the Office of the Secretary of Defense stated:

To achieve full economic diversification in Vieques, it will be necessary to identify projects that can produce jobs and income from marine resources development.

Economic Adjustment Program for Vieques, Puerto Rico (EAP), President's Economic Adjustment Committee, Office of the Secretary of Defense, February 1986, pages 107-110, B-5 and B-6, attached as Exhibit 8 to Appellant's Initial Brief. The EAP described a proposed Caribbean King Crab mariculture

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<sup>2</sup> See Statement of Rear Admiral Ernest E. Christensen Jr. to Congress, as printed in The Vieques Times, October 1994, attached as Exhibit 1 to Appellant's Initial Brief; Lt. Cmdr. Michael McClosky, "The Navy and Vieques", The Vieques Times, May 1994, attached as Exhibit 2 to Appellant's Initial Brief.

<sup>3</sup> See Letter from Manuela Santiago Collazo, Mayor, Vieques to Honorable Pedro Gelabert, Secretary, Department of Natural Resources (DNR), January 21, 1993, as translated from Spanish by Appellant (original not provided) and attached as Exhibit 19 to Appellant's Initial Brief. See also Letter from Rafael Hernández Colón, Governor, Commonwealth of Puerto Rico, to The Honorable Richard Cheney, Secretary, DOD, March 27, 1992, attached as Exhibit 5 to Appellant's Initial Brief.

MOU, attached as Exhibit 4 to Appellant's Initial Brief and as Exhibit 5 to PRPB Initial Brief.

<sup>5</sup> Letter from Elsie L. Munsell, Deputy Assistant Secretary of the Navy (Environment and Safety), DOD, to Pamela B. Lawrence, Attorney-Adviser, Office of the Assistant General Counsel for Ocean Services (GCOS), NOAA, July 17, 1995 (July 17, 1995 DOD Letter).

demonstration project<sup>6</sup>, one developed in conjunction with the Marine Systems Laboratory of the Smithsonian Institution. The Secretary of Puerto Rico's Department of Natural Resources (DNR) agreed to provide funding for the demonstration, and it was believed that this project could provide up to 100 jobs. EAP at 107, 109. According to Appellant, Director "had been named to direct" this project in 1986. Appellant's Initial Brief at 2. This report noted that "[t]he only site in Vieques that had the proper conditions is . . . Ensenada Honda." EAP at 109.

When a key piece of federal funding was denied, the Caribbean King Crab project ended. Appellant's Initial Brief at 2. At some time later, Director began work on the shrimp mariculture project in the Bay. Director rejected the use of Ensenada Honda for this project because, unlike the Bay, use of Ensenada Honda "would require the alteration of mangrove wetlands for access to the bay and the facility." Environmental Assessment of Puerto Ferro Bay, Vieques, Puerto Rico (Appellant's Assessment) at 4, attached as Exhibit 12 to Appellant's Initial Brief.

The Bay is included in several categories of special note in Puerto Rico's CMP, as set out in the document entitled Puerto Rico Coastal Management Program and Final Environmental Impact Statement (PRCMP), July 12, 1978. First, the Bay is within an area identified as a Critical Area for Endangered Wildlife. PRPB Initial Brief at 4; Map 13 of PRCMP, attached as Exhibit 3 to PRPB Initial Brief. The Bay is also an important area for waterfowl including the endangered white-cheeked Pintail (Anas bahamensis), several species of doves and pigeons including White-crowned Pigeon (Columba inornata). PRPB Initial Brief at 4. The area also supports endangered species such as Manatees (Trichechus manatus) and sea turtles around the area. Id. The very rare Key West Quail Dove (Geotrygon chrysia), was reported in the arid scrub of the Ferro Peninsula. Id.

The Bay also lies just to the east of the Vieques Bioluminescence Reserve, a reserve that includes the bioluminescent bay of Puerto Mosquito, the bay immediately to the west. PRPB Initial Brief at 3-4. Although the parties dispute the significance of this, small quantities of Pyrodinium, a bioluminescent organism, were detected in the Bay in 1972 and again in 1993. Appellant's Assessment at 7; PRPB Initial Brief at 10. Puerto Ferro is

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<sup>6</sup> This project was developed as "part of [DOD's] cooperative effort to improve the economy of Vieques." Letter from the Secretary of Defense to Honorable Rafael Hernández Colón, Governor of Puerto Rico, April 12, 1986, attached as Exhibit 9 to Appellant's Initial Brief.

identified as a bioluminescent bay in PRCMP. PRPB Initial Brief at 4; Map 26 of PRCMP, attached as Exhibit 4 to PRPB Initial Brief.<sup>7</sup>

In addition, the waters of the Bay are classified as meeting the highest standard, those waters whose existing characteristics should not be altered, in order to preserve natural phenomena. PRPB Initial Brief at 12; Map 14 of PRCMP, attached as Exhibit 10 to PRPB Initial Brief.

Both the United States Fish and Wildlife Service (FWS)<sup>8</sup> and the National Marine Fisheries Service (NMFS)<sup>9</sup> have commented on the ecological value of the Bay. FWS described the Bay as "a tropical bay with extensive seagrass beds and a shoreline bordered by mangrove forest. This bay provides excellent habitats for juvenile fish and shellfish, and for a number of rare birds. The federally listed threatened green (Chelonia mydas) and the endangered hawksbill (Eretmochelys imbricata) sea turtles have been reported to use the bay."<sup>10</sup>

NMFS described the Bay as having "high habitat, nursery and food chain support values."<sup>11</sup> NMFS also noted: "[The Bay's bottom] communities contribute to overall fisheries productivity. They provide habitat and nursery area for a wide diversity of species which are ecologically and economically important. Species commonly associated with seagrass and live bottom communities include mangrove snapper, penaeid shrimp, conch, callinectid crabs, anchovy, tarpon, and mullet. Seagrasses also produce and export detritus essential to the estuarine food web, stabilize nearshore sediments, and filter pollutants from the water column."<sup>12</sup>

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<sup>7</sup> See also Letter from John G. Rogers, Deputy Director, Fish and Wildlife Service (FWS), U.S. Department of the Interior (DOI), to Pamela B. Lawrence, Attorney-Adviser, GCOS, NOAA, May 26, 1995 (May 26, 1995 FWS Letter): "Some nearby bays are internationally known for their night displays of dinoflagellate bioluminescence and Puerto Ferro bay may display similar bioluminescent activity."

<sup>8</sup> FWS is part of DOI.

NMFS is part of NOAA.

<sup>10</sup> May 26, 1995 FWS Letter.

<sup>11</sup> Letter from Andreas Mager, Assistant Regional Director, Habitat Conservation Division, NMFS, to Colonel Terrence C. Salt, District Engineer, Corps, April 12, 1994 (April 12, 1994 NMFS Letter), attached to Memorandum from Andreas Mager, Assistant Regional Director, Habitat Conservation Division, NMFS, to Pamela Lawrence, Attorney-Adviser, GCOS, NOAA, May 16, 1995 (May 16, 1995 NMFS Memorandum).

<sup>12</sup> Letter from Andreas Mager, Assistant Regional Director, Habitat Conservation Division, NMFS, to Colonel Terrence C. Salt, District Engineer, Corps, December 8, 1993 (December 8, 1993 NMFS Letter), attached to May 16, 1995 NMFS Memorandum.

## II. Procedural Background

Appellant applied to the Corps for a permit<sup>13</sup> for the placement of the buoys, the cages and the wooden dock. In conjunction with that federal permit application Appellant submitted to the Corps a certification that the proposed activity is consistent with Puerto Rico's CMP. PRPB reviewed the certification pursuant to section 307(c)(3)(A) of the CZMA. 16 U.S.C. § 1456(c)(3)(A).

PRPB objected to Appellant's proposed project on the grounds that it violates the following public policies of Puerto Rico's CMP:

Policy 17.04: To avoid unnecessary loss of options for future use of the resources resulting from the establishment of new activities or from the authorization of new subdivisions.

Policy 18.00: To protect natural, environmental, and cultural resources from destruction or irreparable damage caused by misuse or by failing to consider the adverse impact of activities upon them.

Policy 18.01: To reduce the adverse impact of pollution on resources, by identifying and controlling the causes and sources of such pollution.

Policy 18.03: To avoid activities and land subdivision which could cause the deterioration or destruction of those natural systems essential for preserving the environment, such as mangroves, forest, reefs, dunes, ecological systems, and habitats of endangered species.

Letter from Norma E. Burgos-Andújar, Chairwoman, PRPB to Director, Appellant (PRPB Objection), March 31, 1994 at 3-4, attached as Exhibit 2 to PRPB Initial Brief. In addition, PRPB stated its concern that the site of the proposed activity is located in territorial waters and submerged lands. Id. at 3. This area is in the public domain and is under the jurisdiction of the DNR. Id. See 3 L.P.R.A. §§ 151 et seq. (1989). Of specific concern to PRPB is that Appellant's proposed project would jeopardize the ecological communities existing in the proposed area as well as other systems close to the area, by virtue of introducing exotic species with their associated diseases, and would also affect the water quality of the Bay, by the increase of nutrients from food and animal waste resulting from the concentrated culture of shrimp. PRPB Initial Brief at 1-2. PRPB also noted its concern that permitting this mariculture project, which would be the first in Puerto Rico, would set a precedent. Id. at 3. PRPB then presented the

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The Corps permit is required under § 10 of the Rivers and Harbors Act of 1899, 33 U.S.C. § 403.

alternative of considering an upland site for the project and/or the carrying out of a complete monitoring study. Id. at 4. Under section 307(c)(3)(A) of the CZMA and 15 C.F.R. § 930.131, PRPB's consistency objection precludes the Corps from issuing a permit for the activity unless the Secretary of Commerce finds that the activity is either consistent with the objectives or purposes of the CZMA (Ground I), or necessary in the interest of national security (Ground II).

### III. Appeal to the Secretary of Commerce

In accordance with section 307(c)(3)(A) of the CZMA and 15 C.F.R. Part 930, Subpart H, Appellant filed with the Department of Commerce a notice of appeal from PRPB's objection to its proposed project. Letter from Director, Appellant, to Secretary of Commerce, April 29, 1994 (Notice of Appeal). Appellant filed additional information and exhibits. Appellant's Initial Brief. PRPB filed a response brief. PRPB Initial Brief.

As provided by its regulations, NOAA sent letters to several federal agencies asking them to present their views regarding the merits of the appeal.<sup>14</sup> Most of the federal agencies responded.<sup>15</sup> Public comments on issues germane to the decision in the appeal were also solicited by public notices published in the Federal Register, 60 Fed. Reg. 20673 (April 27, 1995), and the San Juan Star (April 26, 27, 28, 1995). No comments were received from the general public.

After the public comment period closed, NOAA provided Appellant and PRPB with an opportunity to file final responses to any submission filed in the appeal. Both Appellant and PRPB submitted final briefs. Letter from Director, Appellant, to Pamela Lawrence, Attorney-Adviser, Office of the Assistant General Counsel for Ocean Services, August 31, 1995 (Appellant's Final Brief); Letter from Norma E. Burgos-Andújar, Chairwoman, PRPB, to Margo E. Jackson, Assistant General Counsel for Ocean Services, August 28, 1995 (PRPB Final Brief). All documents and information received during the course of this appeal have been included in the administrative record.<sup>16</sup> However, I will only consider those documents and information relevant to the

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<sup>14</sup> NOAA requested comments from DOD, DOI and the U.S. Departments of Energy (DOE), State (DOS), Transportation, and the Treasury; from FWS, the Minerals Management Service, and the National Park Service (components of DOI); the Corps; the Environmental Protection Agency (EPA); the Federal Energy Regulatory Commission (FERC); the National Security Council (NSC); the U.S. Coast Guard; and NMFS.

<sup>15</sup> Responding were DOD, DOE, DOI (whose response was submitted by FWS), DOS, the Corps, EPA, FERC, NSC, and NMFS.

These documents and information were submitted in accordance with NOAA's request for comments.

statutory and the regulatory grounds for deciding an appeal. See Decision and Findings in the Consistency Appeal of Olga Vélez Lugo, September 9, 1994, at 2.

As with prior consistency appeals, I have not considered whether PRPB complied with the laws of Puerto Rico in determining that the proposed activity is inconsistent with Puerto Rico's CMP. See Id. at 3.

#### IV. Threshold Issues

##### A. Project's Location Outside of the Coastal Zone

Appellant raises a threshold issue challenging PRPB's ability to object to the project, based on Appellant's belief that the waters of the Bay, which are surrounded by U.S. Naval Base Camp Garcia, are federal lands excluded from Puerto Rico's coastal zone.<sup>17</sup> Section 304(1) of the CZMA includes in the definition of "coastal zone" the following provision:

Excluded from the coastal zone are lands the use of which is by law subject solely to the discretion of or which is held in trust by the Federal Government, its officers or agents.

16 U.S.C. § 1453(1). Appellant points to several references in PRCMP and its maps to the exclusion of federal lands from the coastal zone, and the fact that the term "land" is defined for purposes of PRPB's Organic Act to include water.<sup>18</sup>

In relevant part, 48 U.S.C. § 749 provides that:

The harbor areas and navigable streams and bodies of water and submerged lands underlying the same in and around the island of Puerto Rico and the adjacent islands and waters, now owned by the United States and not reserved by the United States for public purposes, be, and the same are hereby, placed under the control of the government of Puerto Rico ...

The 1980 amendment to 48 U.S.C. § 749 added the following definition of the term "control":

Notwithstanding any other provision of law, as used in this section ... "control" includes all right, title, and interest in and to and jurisdiction and authority

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<sup>17</sup> Appellant stated in its Notice of Appeal: "It is our understanding that the project site in question is excluded from the PRCMP and therefore [PRPB's consistency objection] should be invalidated."

<sup>18</sup> Notice of Appeal and accompanying exhibits; Exhibit A to Appellant's Final Brief.

over the submerged lands underlying the harbor areas and navigable streams and bodies of water in and around the island of Puerto Rico and the adjacent islands and waters, and the natural resources underlying such submerged lands and waters, and includes proprietary rights of ownership, and the rights of management, administration, leasing, use, and development of such natural resources and submerged lands beneath such waters.

There is no evidence in the record that the waters of Vieques have been reserved by the United States for public purposes. Further, the agency for whom the waters would most likely have been reserved, DOD, clarified that the Bay "itself is not controlled by the Navy" in explaining that the Navy's role had been to "[p]ermit . . . the Appellant to lease a small piece of property on Camp Garcia and provid[e] [Appellant] with access to a site for mariculture on the bay".<sup>19</sup> DOD made no mention of the Bay's waters or submerged land being excluded from Puerto Rico's coastal zone. Further, FWS stated that: "The land surrounding Puerto Ferro is Navy land, and the coastal waters are under the jurisdiction of the Commonwealth of Puerto Rico."<sup>20</sup>

Accordingly, I conclude that the land of the Bay is not federal land excluded from the coastal zone. Because I conclude that the submerged land of the Bay is not federal land excluded from Puerto Rico's coastal zone, I need not address whether Appellant's activity otherwise would have effects on Puerto Rico's coastal resources and uses beyond the area at issue.<sup>21</sup>

#### B Incorrectness of the Bay's special status in PRCMP

Appellant also argues that for various reasons, the Bay should not be considered as a critical coastal wildlife area, nor should it be considered as a bioluminescent bay, nor should the Bay's waters be viewed as of the highest quality. See Appellant's Initial Brief at 2; Appellant's Final Brief at 1-3 and Appendix A at 2-4, 7-9. Appellant bases its contentions on its apparent belief that the Bay should never have been designated in such fashions in PRCMP (Appellant's Final Brief at Appendix A at 4), as well as on an alleged lack of government involvement in managing the areas. Appellant's Final Brief at Appendix A at 5.

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<sup>19</sup> July 17, 1995 DOD Letter.

<sup>20</sup> May 26, 1995 FWS Letter.

<sup>21</sup> An activity requiring a federal permit would still be subject to the consistency requirement even if located on land excluded from the coastal zone, if that activity affected any land or water use or natural resource of a state's coastal zone. CZMA Section 307(c)(3)(A), 16 U.S.C. § 1456(c)(3)(A).

The Secretarial override process addresses neither a possible need to revise a state's coastal management program nor the issue of whether a state is complying with its federally-approved coastal management program.<sup>22</sup> My determination as to whether to override a state's objection to a consistency certification is based instead on the grounds contained in CZMA § 307(c)(3)(A), 16 U.S.C. § 1456(c)(3)(A), and CZMA implementing regulations. See Section V, below. Accordingly, I do not consider Appellant's contentions except as they may relate to the statutory and regulatory grounds for Secretarial override.

### C. Failure of PRPB to Comply with Specific Regulations

Appellant also alleges for the first time in its Final Brief that PRPB failed to comply with the regulations set forth in 15 C.F.R. §§ 930.56(a), 930.61(a) and (b), 930.64(c) and 930.124. Appellant's Final Brief at Appendix B. Appellant did not raise these issues in its Notice of Appeal nor in its Initial Brief. 15 C.F.R. § 930.56(a) states in part that "any applicant for a Federal license or permit ... should obtain the views and assistance of [the coastal management] agency regarding the means for ensuring that the proposed activity will be conducted in a manner consistent with the State's management program. As part of its assistance efforts, the State agency shall make available for public inspection copies of the management program document." The regulation at 15 C.F.R. § 930.64(c) provides in part: "During the period when the State agency is reviewing the consistency certification, the applicant and the State agency should attempt to agree upon conditions, which, if met by the applicant, would permit State agency concurrence." The regulation at 15 C.F.R. § 930.124 states: "In the event the State agency informs the applicant, person or applicant agency that it intends to object to the proposed activity, the parties should consult informally to attempt to resolve the matter in a manner which avoids the necessity of appealing the issue to the Secretary. OCZM [the office within NOAA charged with administering the CZMA] shall be available to assist the parties in these discussions."

While these regulations envision and encourage communication between the coastal management agency and an applicant for a federal permit, they do not establish specific procedures for such communication. In this case, the record reveals that Appellant had at least one such meeting, in January of 1994, while the consistency review was pending. As to the issue of whether or not PRPB provided copies of the management program document, Appellant has made no allegations that it was not

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<sup>22</sup> The latter issue, a state's compliance with its coastal management program, is reviewed by NOAA at periodic intervals pursuant to CZMA § 312, 16 U.S.C. § 1458.

provided with such document or that the management program document was unavailable for inspection; indeed it has quoted from it.

The other regulation which Appellant alleges PRPB has violated is 15 C.F.R. § 930.61(a) - (b), which provides that:

(a) Following receipt of [Appellant's consistency certification], the State agency shall ensure timely public notice of the proposed activity. At a minimum the provision of public notice must be in accordance with State law. In addition, public notice must be provided in the immediate area of the coastal zone which is likely to be affected by the proposed activity. Public notice shall be expanded in proportion to the degree of likely public interest resulting from the unique geographic area involved, the substantial commitment of or impact on coastal resources, the complexity or controversy of the proposal, or for other good cause.

(b) Public notice shall facilitate public comment by providing a summary of the proposed activity, by announcing the availability for inspection of the consistency certification and accompanying public information and data, and by requesting that comments be submitted to the State agency.

Other than quoting this regulation, Appellant has provided no information regarding any failure on the part of PRPB to provide adequate public notice.

#### Grounds for Overriding a State Objection

I now examine the grounds provided in the CZMA for overriding PRPB's objection. I will override PRPB's objection if I find that Appellant's proposed project is consistent with the objectives of the CZMA (Ground I), or otherwise necessary in the interest of national security (Ground II). See also 15 C.F.R. § 930.130(a).

The four elements of Ground I are:

1. The proposed activity furthers one or more of the competing national objectives or purposes contained in §§ 302 or 303 of the CZMA. 15 C.F.R. § 930.121(a).
2. The proposed activity's adverse effects, when considered individually or cumulatively, on the

natural resources of the coastal zone are not substantial enough to outweigh its contribution to the national interest. 15 C.F.R. § 930.121(b).

- 3 The proposed activity will not violate the Clean Water Act or the Clean Air Act. 15 C.F.R. § 930.121(c).
4. There is no reasonable alternative available that would permit the proposed activity to be conducted in a manner consistent with PRPB's coastal management program. 15 C.F.R. § 930.121(d).

To find that the proposed activity satisfies Ground I, I must determine that the activity satisfies all four of the elements specified above. If the project fails to satisfy any one of the four elements, I must find that the project is not consistent with the objectives or purposes of the CZMA. Because Appellant's proposed project fails to satisfy Element 2 of Ground I, I will turn immediately to consideration of that element.

#### VI. Element 2

To satisfy Element 2 of Ground I, I must find that the proposed project's adverse effects on the natural resources or land and water uses of the coastal zone are not substantial enough to outweigh its contribution to the national interest. To do so, I must first determine what adverse effects the project will have on the coastal zone and what the project will contribute to the national interest. I then balance to see whether the project's adverse effects outweigh the national interest contribution.

##### A. Adverse Coastal Effects

The adverse effects of the proposed project must be analyzed both in terms of the project itself, and in terms of its cumulative effects. That is, I must look at the project in combination with other past, present and reasonably foreseeable future activities affecting the coastal zone. See Decision and Findings in the Consistency Appeal of the Virginia Electric and Power Company (Lake Gaston Decision), May 19, 1994 at 21-22.

PRPB asserts that adverse impacts to the ecosystem and to the water quality of the Bay would result from three different factors: the introduction of excessive nutrients into the Bay from food and animal waste; the introduction of exotic species of Penaeus into the waters of Vieques; and the potential impacts to seagrass beds from the shading resulting from 5 acres of cages. PRPB Initial Brief at 9. See also Objection Letter at 2; PRPB Final Brief at 2-3.

These concerns are echoed by the two federal resource management agencies that commented, FWS and NMFS. FWS' knowledge arises from FWS' participation in various rounds of review of this specific project, review that included meeting with Appellant's representatives as well as several other communications.<sup>23</sup> FWS stated:

The Service supports the Puerto Rico Planning Board determination on Ground I, that the Appellant's proposal is not consistent with the Puerto Rico Coastal Zone Management Plan objectives under the CZMA.<sup>24</sup>

NMFS, in earlier communications regarding this project which it submitted as part of its comment on this appeal, stated:

The proposed project may significantly alter the existing seagrass and live bottom communities in Puerto Ferro through water and sediment quality degradation and shading. These communities contribute to overall fisheries productivity. They provide habitat and nursery area for a wide diversity of species which are ecologically and economically important. Species commonly associated with seagrass and live bottom communities include mangrove snapper, penaeid shrimp, conch, callinectid crabs, anchovy, tarpon, and mullet. Seagrasses also produce and export detritus essential to the estuarine food web, stabilize nearshore sediments, and filter pollutants from the water column. The individual and cumulative effects of this and other similar projects would be significant.

In view of the above, we recommend that no permit be issued for the project as currently proposed.<sup>25</sup> . . .

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<sup>23</sup> See May 26, 1995 FWS Letter ("The Service has expressed concern about this project from the time of the Appellant's first mariculture project proposal to the Vieques Management Committee . . . Our Federal involvement on this issue has been through the Navy, the Farmer's Home Administration (the Appellant applied for a loan), and the Army Corps of Engineers regulatory program (199350163 IP)") and Letter from James P. Oland, Field Supervisor, Caribbean Field Office, FWS, to Lt. Colonel Stephen Benton, Deputy District Engineer, Corps, November 29, 1993 (November 29, 1993 FWS Letter), attached to May 16, 1995 NMFS Memorandum ("We have previously consulted extensively with [Appellant] as part of the Navy's review of proposed projects. . . . We would like to emphasize that [Appellant] has been made aware of [FWS] concerns previously in both correspondence and meetings held as a result of consultation with the Navy."). See also Letter from James P. Oland, Field Supervisor, Caribbean Field Office, FWS, to Lt. Colonel Stephen Benton, Deputy District Engineer, Corps, April 5, 1994 (April 5, 1994 FWS Letter), attached to May 16, 1995 NMFS Memorandum; Letter from James P. Oland, Field Supervisor, Caribbean Field Office, FWS, to Mr. Luis Frías Taboas, Secretary, PRPB, November 3, 1993, attached as Exhibit 8 to PRPB Initial Brief; and Letter from James P. Oland, Field Supervisor, Caribbean Field Office, FWS, to Mr. Luis Frías Taboas, Secretary, PRPB, April 8, 1994, attached as Exhibit 8 to PRPB Initial Brief. In addition, Appellant's Assessment notes communications with Mr. Oland on September 3, 1992; March 26, 1993; and July 1, 1993. Appellant's Assessment at 15-16.

<sup>24</sup> May 26, 1995 FWS Letter.

<sup>25</sup> December 8, 1993 NMFS Letter.

We further note that high habitat, nursery and food chain support values of the proposed site render it unsuitable for this operation.<sup>26</sup>

1 Additional Nutrients from Shrimp Feces and Excess Shrimp Feed

PRPB's concerns with respect to the introduction of nutrients revolve around the water quality of the Bay:

Furthermore, this type of project would affect the water quality of the bay. Based on FWS comments projects involving floating cages or enclosures of high densities of mariculture species in natural areas have resulted in water quality problems and "dead zone" around cages. Often the water quality problems resulting from excess nutrients include reduction of dissolved oxygen. The Appellant said in his appeal brief - no drainage or discharge are<sup>27</sup> proposed - we differ on that argument because at the same time that shrimps are being introduced into the bay, an excess of nutrients (food and shrimp feces) is occurring in the area.

PRPB Initial Brief at 11.

Appellant provides the following information regarding the introduction of additional nutrients:

To limit the amount of nutrients introduced by the shrimp, cages will be outfitted with catchment devices which catch excess food and feces which fall from the cages. These catchment devices will be changed frequently enough to prohibit the lose of material into the sea. Catchment devices will be taken to shore, dried, scraped and the material rinsed of salt and used a fertilizer. Samples of the collected material will be analyzed for uneaten food to determine feed amounts in the future.

Some nutrients will enter the bay due to wave action, currents and dilution. Some will be in the form of suspended solids and others as dissolved solids. These components will be taken up by fish, invertebrates, filters feeders, algae, mangroves and seagrasses. The

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<sup>26</sup> April 12, 1994 NMFS Letter.

<sup>27</sup> PRPB Objection and Briefs and Appellant's Assessment contained a number of what appear to be typographical or grammatical errors. To avoid the risk of changing any meaning in the document, I do not correct the errors for the purposes of this decision.

amount of nutrients introduced will be small and should not lead to eutrophication of the bay. Water quality and the surrounding environment will be monitored for changes or impacts and if they are noted contingency measures will be implemented to stem the dispersal of the nutrients.

#### Appellant's Assessment at 11

In its earlier recommendation to the Corps that a permit not be issued for this project, NMFS stated:

[W]e have determined that the proposed project could adversely affect marine fishery resources for which the NMFS has stewardship responsibility. In areas where guidelines have been developed (for example, the state of Mississippi) for offshore marine aquaculture, a certain amount of "dead zone" around the cage area is assumed. Depending on a variety of factors such as biomass of the cultured species and prevailing current conditions, the footprint of the impact can extend as much as 20 to 50 meters outside the actual cage area (Dr. Jurijj Homziak, personal communication). This assumption is apparently based on observations of existing facilities, primarily in a northern climate where lower water temperatures result in fewer problems with dissolved oxygen than would be expected in warmer tropical or subtropical areas. Dr. Homziak indicated that all of the marine aquaculture guidelines of which he is aware require these facilities to be located in areas void of any vegetation and well removed from productive resources such as seagrass or oyster beds.

[Appellant] has attempted to address some of these concerns. The actual mooring sites are located in areas vegetated with macroalgae and sparse seagrass vegetation. However, the entire site is in the center of a highly productive seagrass bed and live bottom community. [Appellant] also proposes to use "catchment devices." However, we are not convinced that such devices would be effective in trapping excess food and shrimp waste material, especially given [Appellant's] claim that a swift bottom current in the area provides considerable flushing. [Appellant] also proposes to reduce impacts by moving the cages around within the 80 acre containment area once a month. Based on our

conversation with Dr. Homziak, we do not think this would be effective in reducing total impacts. It may even increase the total amount of area impacted.<sup>28</sup>

FWS had the following comments on this issue:

[Appellant] planned to locate the floating cages over bay bottom with little or no vegetation; however, we continue to have concerns for the excess nutrient input to a normally low nutrient tropical bay with restricted seawater circulation. Seagrass beds and corals are highly sensitive to overgrowth by algae and light reduction from excessive phytoplankton production (blooms) that usually result from excess nutrient input. Furthermore, the high stock densities of shrimp cultured in floating pens and the release of their metabolic wastes would exacerbate the nutrient loading of the bay waters and may significantly increase the biological oxygen demand (BOD) in the area and cause low dissolved oxygen conditions. These concerns have occurred in other areas and have been addressed in aquaculture publications [citation omitted] and in documents supporting regulations for floating pen culture. The mariculture guidelines in Mississippi, for example, prohibit net pen culture within one nautical mile of a seagrass bed. Puerto Ferro bay, in contrast, is about one nautical mile in its longest dimension.<sup>29</sup>

FWS had earlier noted with respect to this project that: "Cage culture projects are also severely restricted in many states due to potential impacts (see enclosure) with some states specifying that they will not be located in areas with special aquatic sites."<sup>30</sup>

Appellant attempts to bolster its case with estimated amounts of shrimp feces and feed-derived nitrogen which would enter the Bay as a result of its project.<sup>31</sup> With respect to shrimp feces, Appellant states: "The daily fecal entry to the bay ... would be only one part in 100 million, a minute proportion, most of which

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<sup>28</sup> December 8, 1993 NMFS Letter.

May 26, 1995 FWS Letter.

<sup>30</sup> April 5, 1994 FWS Letter.

<sup>31</sup> PRPB states: "Although the Appellant intends to ensure through computer models and studies that no water quality problems would be created by his project, [the PRPB] considers that the existing conditions of the Bay will not be the same with the introduction of this new use. The best way to maintain the quality of the coastal waters is leaving alone these areas from any activity such as the one under our consideration that could be located in other sites as land ponds without the necessity to cause impacts in the marine system." PRPB Initial Brief at 13.

only one part in 100 million, a minute proportion, most of which is borne away by the tides."<sup>32</sup> Further, with respect to the amount of uneaten shrimp food entering the environment, Appellant has provided a calculation that the amount of uneaten food would provide no more than 1 microgram of nitrogen per liter (apparently per day), noting that the healthy mangroves surrounding the Bay "maintain a nitrogen level of about 60 micrograms per surrounding liter."<sup>33</sup>

However, these calculations are not persuasive. With respect to the shrimp feces calculation, Appellant's failure to take several factors into account results in an apparent underestimation of the amount of feces to be introduced into the Bay, as well as failing to describe how much additional shrimp feces would remain in the waters of the Bay. Appellant's calculation for quantity of shrimp feces as one part per 100 million is based on a calculation that shrimp averaging from 6 to 8 grams produce an estimated .06 grams of feces per shrimp each day.<sup>34</sup> However, Appellant without explanation uses a figure of .045 grams of feces per shrimp per day.<sup>35</sup> Further, Appellant's calculation makes no adjustment for the fact that shrimp will not be harvested until they reach the size of 28 grams. Appellant's Assessment at 2. Presumably the larger shrimps will generate some larger amount of feces per day, but Appellant does not provide any information regarding calculation of this additional amount. In addition, Appellant does not discuss the fact that according to Appellant's own calculations, it takes four days to flush the Bay.<sup>36</sup> If this is correct, additional amounts of shrimp feces would be introduced into the Bay before prior daily amounts were completely flushed out. Thus, whatever the correct figure for daily amount of shrimp feces introduced into the Bay, the existing concentration of shrimp feces in the Bay will be higher than that figure.

With respect to the feed-derived nitrogen, Appellant relies on "Marine veterinarian and nutritionist Dr. Mark Subramanian

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<sup>32</sup> Vieques Marine Laboratories: Shrimp Waste Statistics, attached as Exhibit 13 to Appellant's Initial Brief.

<sup>33</sup> Vieques Marine Laboratories: On Nutrient Discharge, attached as Exhibit 15 to Appellant's Initial Brief.

<sup>34</sup> Facsimile to Timothy Goertemiller from Warren Dominy, Oceanic Institute, Hawaii, dated December 10, 1992, attached as Exhibit 13 to Appellant's Initial Brief.

<sup>35</sup> Vieques Marine Laboratories: Shrimp Waste Statistics, attached as Exhibit 13 to Appellant's Initial Brief.

<sup>36</sup> Tidal Flush Quantification, attached as Exhibit 14 to Appellant's Initial Brief.

unacceptable."<sup>37</sup> Appellant does not however describe exactly in what sense the 5% is unacceptable, whether this waste would be unacceptable for the profitability of the enterprise or whether it would be unacceptable for the health of the shrimp or unacceptable for a sensitive marine environment. Nor does the reference to the unacceptability of the 5% provide any indication as to whether in fact Appellant would be able to limit feed waste to 5% or less. Beyond this "acceptability" conclusion, Appellant provides little description of the coastal impacts of the levels of nitrogen it proposes would be introduced.

Further, Appellant provides no information regarding the introduction of other possible nutrients from the feed, or from the shrimp feces, nor on how these additional nutrients will raise the total nutrient level of the Bay.

Most importantly, Appellant provides no information on the most critical issue, and that is how these additional nutrients do or do not affect either the water quality of the Bay or other coastal resources and uses of Puerto Rico's coastal zone. Appellant cites one study that determined that water quality in a closed, non-circulating system remained "sufficiently high to harvest" a sizable amount of shrimp even when 136 kilograms of feed per hectare were placed per day.<sup>38</sup> However, this study provides no information as to whether water quality would remain sufficiently high for seagrass beds or other of the Bay's resources, even if Appellant was placing a substantially smaller amount of feed each day. Appellant argues that placing what would be 2 kilograms of feed per hectare per day in an open system with constant water circulation would create "no water quality problems which would, after all, be most harmful to our own shrimp."<sup>39</sup> In making this statement, Appellant places no emphasis on the fact that any water quality problems which could harm the shrimp, which are not currently present in these waters, could also harm the resources that are now part of the Bay's ecosystem.

Appellant's only other argument as to why these additional nutrients would not affect the Bay's resources is that Puerto Ferro "enjoys excellent water quality" due to the good water circulation and that the Bay "does not have a restricted water exchange." Appellant's Assessment at 8. Appellant calculates

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Brief. Vieques Marine Laboratories: On Nutrient Discharge, attached as Exhibit 15 to Appellant's Initial

<sup>38</sup> Id.

<sup>39</sup> Id.

that the tidal flush of the Bay is 87,730 gallons per minute, "sufficient to completely replace the full volume of bay waters every four days."<sup>40</sup>

While neither PRPB nor FWS provide a similar quantification of tidal flush, they both refer to the Bay as having restricted seawater circulation.<sup>41</sup> The FWS also specifically notes that "Puerto Ferro is a relatively enclosed, shallow bay with a somewhat narrowed entrance. Tidal range in Puerto Rico is about 18 inches, so tidal flushing of this bay is relatively small."<sup>42</sup> Further, the EAP stated that "[t]he only site on Vieques that had the proper conditions [for the earlier Caribbean King Crab mariculture project] is Ensenada Honda." EAP at 109. The map of the Island clearly supports PRPB's claim that "Ensenada Honda is a wide bay, open to the ocean so that there is better water circulation than in Puerto Ferro which is a narrow bay, pretty close at the mouth entrance." PRPB Initial Brief at 16, Exhibit 11 (map of Vieques). The only acknowledgement of Appellant's position comes from NMFS, which simply noted its concern that Appellant's proposed "catchment" devices for feces and excess feed may not be effective, "especially given [Appellant's] claim that a swift bottom current in the area provides considerable flushing."<sup>43</sup>

Based on all of the materials in the record, those submitted by Appellant, PRPB and the federal agencies, I find that Appellant's proposed project will cause adverse effects on the natural resources of Puerto Rico's coastal zone through the introduction of additional nutrients resulting from shrimp feces and excess shrimp feed into the waters of Vieques.

## 2 Introduction of Exotic Species

PRPB states its concern that the project would introduce exotic species of Penaeus into the waters of Vieques. PRPB Initial Brief at 9. PRPB explains further that:

Although these exotic species have been cultivated on ponds, they are cultivated in artificial systems which are under the management and control of man. Cultivating them in open marine systems will be subject to natural changes which are not under the controlled of man. As FWS stated, the cage culture, by its nature poses a much higher risk of escape

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<sup>40</sup> Tidal Flush Quantification, attached as Exhibit 14 to Appellant's Initial Brief.

See PRPB Initial Brief at 16; PRPB Final Brief at 2; May 26, 1995 FWS Letter at Attachment.

May 26, 1995 FWS Letter.

December 8, 1993 NMFS Letter.

even when a second net would be place. Thus, there is a possibility of unavoidable impacts to sensitive marine systems.

PRPB Initial Brief at 9-10.

The proposed project not only would cause adverse impacts to the marine systems existing within the area but also to the surrounding habitats such as Vieques Bioluminescence Reserve.<sup>44</sup>

There is concern about the potential for establishment of exotic populations and the possibility of disease transmission to native organisms.

We continue to believe that occasional releases will occur even when a second net and catchment devices would be placed. This type of culture will be subject to natural changes, such as hurricanes which are not under the control of man.

PRPB Final Brief at 1-3.

With respect to the issue of the introduction of exotic species, Appellant has several reasons for rejecting PRPB's concerns:

This project will be harvesting the shrimp long before they reach sexual maturity, so no risk exists of the caged animals spawning into the bay. The potential risk comes from the escape of the animals from the cages. Cages will be inspected daily for damage and any "leaks" immediately repaired. Secondary enclosure nets are also proposed which would capture escapes from the initial enclosures. The greatest potential for escaping animals would occur if the cages were to become damaged. The choice of Puerto Ferro was made partially because of it being a good protected

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<sup>44</sup> PRPB notes its specific concerns about possible interaction with bioluminescent organisms present in the bay in small numbers:

This is a delicate organism that responds to several chemical and physical characteristics of the area. We believe that any alteration, physical and chemical would jeopardize these organisms or even contribute to the extinction of this valuable resource. Although, a few organisms were found within the bay, it has been clearly demonstrated that Puerto Ferro Bay posses the essential characteristics to allow the proliferation of this unique species, so it would be the beginning of a new bioluminescence bay. No evidence has been provided by the Appellant about the interaction of the exotic shrimps with this organism.

PRPB Initial Brief at p. 10; See also PRPB Final Brief at 3.

Appellant vigorously disputes the characterization of Puerto Ferro Bay as a bioluminescent bay. See Appellant's Assessment at 3, 4, 7, 8, 16, 18; Appellant's Final Brief at 3-4 and Appendix A at 2-4, 7-8.

Because I have other grounds for my decision, I do not resolve this issue.

anchorage and its being able to provide shelter to the cages in the event of a storm. The cages are also designed in such a way that they can be lowered below the area of impact of surface waves. In the event of a catastrophic event, i.e. tsunami, the cages would probably be destroyed and animals released into the environment. This would be an unavoidable event which could not be prevent.

If animals do manage to escape and enter the marine environment they will be of the age and size that they will head out of the bay into deep water (Anderson 1970). They will enter the food chain, most falling prey to marine predators. The limited number which might survive would have a limited chance of finding others of the same species, mating and producing larvae and should have very limited impact on existing population of shrimp which are well established. It is imperative that the shrimp be adequately contained for the project to be financially viable.

#### Appellant's Assessment at 11-12

FWS had the following comments on the issue of escape of the shrimp from the cages.

The exotic species proposed for this project is being used for pond culture in Puerto Rico. There is however concern about the potential for establishment of exotic populations, and the possibility of disease transmission to native penaeid shrimp from further introductions. We believe that the likelihood of shrimp escaping from mariculture cages is higher than for shrimp cultured in ponds.<sup>45</sup> . . .

Concern related to mariculture projects carried out within subtidal natural systems such as bays connected to other water bodies has increased in recent years. While [Appellant's] monitoring plan represents a good attempt to document impacts and includes a statement of willingness to limit or eliminate those impacts if they occur, it would not necessarily correct those that occur before action can be taken. Seagrass beds have long recovery periods from impacts that may persist for

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<sup>45</sup> May 26, 1995 FWS Letter at Attachment.

years or even decades. Exotic species or diseases they may carry, once successfully introduced, may be impossible to eradicate.<sup>46</sup>

In its earlier recommendation to the Corps that a permit not be issued for this project, NMFS stated:

In addition to the sediment and water quality problems associated with marine aquaculture facilities in general, we are also concerned about the potential of this particular facility to introduce non-indigenous species to the general area.

[Appellant] has attempted to address some of these concerns. . . . [Appellant] asserts that the potential for introducing non-indigenous species is negligible because of the proposed cage maintenance routine, the secondary containment (which is not described in any detail), and the fact that the shrimp will be harvested before they reach sexual maturity. According to [Appellant], any individuals which may escape will migrate directly to the open ocean and immediately be consumed by predators or will be unable to find sufficient others of its species to reproduce. While we do not argue the above scenario, we point out that this is a precedent setting project which depends heavily on the proposed cage maintenance. The cumulative impacts of many such projects could be significant. In addition, there remains the probability of a catastrophic event, such as a hurricane, which [Appellant] acknowledges would probably result in the unintentional release of all the shrimp.<sup>47</sup>

In another communication, NMFS stated:

In response to our concerns regarding the possible release of exotic species into surrounding areas, [Appellant] indicates that Texas A&M University Sea Grant Office specifically recommends the proposed species. While these may be the preferred species because of the higher potential for economic success, they are not necessarily the best species with regard to environmental protection. We would also be interested in knowing whether Sea Grant's recommendation was meant to be applied to net pen

April 5, 1994 FWS Letter.

December 8, 1993 NMFS Letter.

aquaculture as well as the more traditional pond aquaculture. We remain unconvinced that unintentional releases of shrimp would not occur.<sup>48</sup>

Based on all of the materials in the record, those submitted by Appellant, PRPB and the federal agencies, I find that Appellant's proposed project will cause adverse effects on the natural resources of Puerto Rico's coastal zone through the likely introduction of this exotic species of shrimp into the waters of Vieques.

### 3 Shading of Seagrass and Algal Communities

PRPB also contends

The proposed cages . . . would also contribute to affect the sea grass beds existing in the area through their shade . . . .

PRPB Initial Brief at 11

Appellant rejects PRPB's concerns regarding shading of the seagrass by the cages necessary for the mariculture project:

Along the mangrove fringe extending out to a depth of approximately 7 ft. The benthic community is composed of seagrasses, Thalassia, Syringodium, and Halodule, and numerous algal species Turbanaria, Dictyota, Avranvillea, Penicillus spp., Caulerpa spp., and Acetabularia. . . . As light becomes limiting in the center of the bay, the seagrass community gives way to barren bottom and patch dense colonies of algae. . . . The cages are to be place in the center of the bay in water of excess of 7 ft. Except for the entrance to the bay, where water clarity allows for grass at deeper depths, this is the lower limit of seagrass. In depths in excess of 7 ft. the bottom is patchily colonized by algae. . . . Surveys will be made at the time of the placement of the cages to ensue that none of the areas enclosed extends into the seagrass beds. Cages will be attached to the perimeter buoys with floating lines and suspended 1 1/2 foot from the bottom from cage floats. Light is already limiting in the area and the light levels at the bottom are very low. The cages will act to limit light further, and some algae may be effect. The cages are not themselves anchored, and will be subject to slight movements and currents, and the shifting angle of the sun throughout the day, so currents, and the shifting angle of the sun throughout

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<sup>48</sup> April 12, 1994 NMFS Letter.

the day, so that none of the benthic area will be complete deprived of light and most if not all of the algae should survive. Amount of habitat lost to algae by shading will be minimal and will be offset by the habitat provided on the ropes, anchor lines, cage floats and enclosures. A large amount of the bottom to be used is unvegetated and thus will not be impacted by the shading.

Appellant's Assessment at 7, 10

FWS, with the concurrence of NMFS, stated on this topic:

[Appellant] proposes the suspension of the cages approximately 1.5 ft. above the bottom by cage floats. These cages will further be moored, apparently in lines, between the mooring floats marking the perimeter of the cultivation site. We previously commented that the mooring of the cages should be **single point** in order to allow the cages to swing freely as a boat would on such a mooring. [Appellant] is apparently proposing a multiple point mooring, since the application states that the cages will be moored between the perimeter buoys and that the cages will be shifted monthly to prevent shading impacts. We do not believe that this is adequate to prevent shading impacts.<sup>49</sup>

Based on all of the materials in the record, those submitted by Appellant, PRPB and the federal agencies, I find that Appellant's proposed project will cause adverse effects on the natural resources of Puerto Rico's coastal zone as a result of the shading of the benthic communities.

#### 4 Cumulative Effects of Other Such Projects

To analyze the cumulative adverse effects, I must look at the project in combination with other past, present and reasonably foreseeable future activities affecting the coastal zone. Lake Gaston Decision at 21-22. PRPB, NMFS, and FWS noted their concern that this project could set a precedent.<sup>50</sup> While there is a possibility of other mariculture projects, there is no

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<sup>49</sup> November 29, 1993 FWS Letter.

<sup>50</sup> See PRPB Objection at 3; December 8, 1993 NMFS Letter ("... we point out that this is a precedent setting project which depends heavily on the proposed cage maintenance. The cumulative impacts of many such projects could be significant. . . . The individual and cumulative effects of this and other similar projects would be significant. . . . In view of the above, we recommend that no permit be issued for the project as currently proposed."); May 26, 1995 FWS Letter at Attachment ("this project . . . would set a precedent for the use of areas already defined as highly sensitive subtidal waters in Puerto Rico.").

indication in the record that such other projects are reasonably foreseeable. Therefore, I find that cumulative adverse effects from Appellant's proposed project are not likely.

B Contribution to the National Interest

The national interests to be balanced in Element 2 are limited to those recognized in or defined by the objectives or purposes of the CZMA. See Lake Gaston Decision at 34. The CZMA identifies two broad categories of national interest to be served by proposed activities. The first is the national interest in preserving and protecting natural resources of the coastal zone. The second is encouraging development of coastal resources. See sections 302 and 303 of the CZMA.

PRPB's position on Appellant's claims that its proposed project contributes to the national interest is as follows:

[PRPB] considers that the Appellant intends to promote his project as one of national interest but [PRPB] differs on this because the project will serve exclusively to private interests, ignoring the national interest that must prevail in this area.

PRPB Initial Brief at 7.

As indicated in our response to the Appellant's brief, the proposed shrimp farm does not satisfy the national interest in the effective management, beneficial use and protection of the coastal zone. . . . [T]he main activity which is the shrimp culture is located in territorial waters and submerged lands, which were designated by law as public domain lands. . . . [W]e consider that the main activity which is located in public domain lands is not in compliance with the conservation goal, primary national objective that must prevail in this area.

PRPB Final Brief at 1-2.

Appellant argues that its project will contribute to the national interest by contributing to: effective management, beneficial use, protection and development of Puerto Rico's coastal zone<sup>51</sup>; use of the Nation's coastal resources to provide high quality seafood at the lowest possible cost<sup>52</sup>; offset competing demands because mariculture will "eliminat[e] the stress of harvesting in

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<sup>51</sup> CZMA section 302(a), 16 U.S.C. § 1451(a).

<sup>52</sup> CZMA section 302(b), 16 U.S.C. § 1451(b).

the wild"<sup>53</sup>; prevention of destruction to the area by those cutting down mangroves and using the site as a dump, by virtue of the presence of Appellant's personnel, including security guards, on the site<sup>54</sup>; provision of a system of Fish Aggregating Devices and artificial reefs to repopulate and enhance overfished areas<sup>55</sup>; locating this project on an existing national defense installation<sup>56</sup>; and furthering the national policy for planning for the siting of aquaculture facilities in the coastal zone<sup>57</sup>. Appellant also cites several CZMA sections which its project does not hinder: the project does not threaten natural systems<sup>58</sup>; that it is cooperating fully with all government agencies<sup>59</sup>; that no drainage or discharges are proposed<sup>60</sup>; and notes that the Puerto Rico coastal management program is already in place<sup>61</sup>. Appellant's Initial Brief at 2-3.

On the issue of national interest, FWS commented:

We agree with [PRPB's] determination that privatization of a portion of these waters for a floating shrimp farm is not consistent with conservation or restoration goals. Their concerns included the restriction of fishermen from the area occupied by the floating cages, as well as potential impacts to the special aquatic sites of the bay that support natural fisheries and wildlife. There was a great deal of discussion over this project as it would set a precedent for the use of areas already defined as highly sensitive subtidal waters in Puerto Rico.<sup>62</sup>

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<sup>53</sup> CZMA Sections 302(c), (f), 16 U.S.C. § 1451(c), (f).

<sup>54</sup> CZMA section 302(d), 16 U.S.C. § 1451(d).

<sup>55</sup> CZMA Section 303(1), 16 U.S.C. § 1452(1).

<sup>56</sup> CZMA Section 303(2)(D), 16 U.S.C. § 1452(2)(D).

<sup>57</sup> CZMA Section 303(2)(J), 16 U.S.C. § 1452(2)(J).

<sup>58</sup> CZMA section 302(h), 16 U.S.C. § 1451(h). It should be noted that Appellant appears to be citing to CZMA section 302(g), 16 U.S.C. § 1451(g), the section that deals with not causing damage to natural systems.

<sup>59</sup> CZMA section 302(i), 16 U.S.C. § 1451(i).

<sup>60</sup> CZMA section 302(k), 16 U.S.C. § 1451(k).

<sup>61</sup> CZMA section 302(m), 16 U.S.C. § 1451(m). Because this section relates to a state's development of an ocean resources plan, Appellant appears to have misread it.

<sup>62</sup> May 26, 1995 FWS Letter at Attachment.

None of the other federal agencies provided comments on whether the project contributed to the national interest for purposes of review of Element 2 of Ground I.

Appellant's project is the first of its kind in Puerto Rico's coastal waters and would provide, as Appellant alleges, the opportunity to learn about mariculture and thus would assist in "planning for the siting of mariculture", as provided for in CZMA section 303(2)(J). In addition, Appellant's project would further the economic development of the area. The CZMA's goals encourage, among other things, economic development. However, it would do so at the cost of placing in private control an area of the public domain lands. Even though Appellant is a non-profit organization, Appellant is still a private company which seeks to control the use of these lands. For as long as the project was located there, all other members of the public, including fishermen, would be foreclosed from entering.

Accordingly, after considering the scope and nature of Appellant's project, I conclude that, although Appellant's project would make a contribution to the national interest, that contribution would only be a limited one.

#### C. Balancing

In Element 2, a project's adverse coastal effects are balanced against its contribution to the national interest. In this case, I found that Appellant's proposed project would cause adverse effects on the natural resources of the coastal zone through the introduction of additional nutrients resulting from shrimp feces and excess shrimp feed into the waters of Vieques; through the likely introduction of this exotic species of shrimp into the waters of Vieques; and as a result of the shading of the benthic communities. I also found the proposed activity's contribution to the national interest, while present, is limited. In balancing these factors and in accordance with the foregoing analysis, I now find that the adverse coastal effects of the proposed activity will outweigh the activity's contribution to the national interest. See 15 C.F.R. § 930.121(b). Accordingly, Appellant has failed to satisfy Element 2.

#### D. Conclusion

Because Appellant must satisfy all four elements of 15 C.F.R. § 930.121 in order for me to override PRPB objection based on Ground I, failure to satisfy any one element precludes a finding that Appellant's project is consistent with the objectives or purposes of the CZMA. Having found that Appellant has failed to satisfy Element 2 of Ground I, it is unnecessary to address the other three elements. Accordingly, I will not override PRPB's objection to Appellant's proposed project based on Ground I.

Ground II: Necessary in the Interest of National Security

The second statutory ground for an override of a State's objection to a proposed activity is based on a finding that an activity is necessary in the interest of national security. To make this determination I must find that "a national defense or other national security interest would be significantly impaired if the activity were not permitted to go forward as proposed." 15 C.F.R. § 930.122.

Appellant alleges in essence that, because of the Navy's commitment to assist in economic development on Vieques, his project is necessary in the interest of national security. Appellant's Initial Brief at 1-2.

In order to decide Ground II, I will give considerable weight to the views of the DOD and other Federal agencies. 15 C.F.R. § 930.122. In soliciting the views of several Federal agencies, the Deputy Under Secretary asked those agencies to identify any national defense or other national security objectives directly supported by Appellant's proposed project, and to indicate which of the identified national defense or other national security interests would be significantly impaired if Appellant's project were not allowed to go forward as proposed.

DOD responded by stating that:

The proposed project is not necessary in the interest of national security as no national defense or other national security interest would be significantly impaired if the activity were not permitted to go forward as proposed. . . . The Navy remains committed to the provisions of the MOU, but believes any assistance it provides to the island's economic development should conform to the needs of Puerto Rico rather than to those of any particular enterprise."<sup>63</sup>

asserted:

We do not believe . . . that the proposed activity could properly be characterized as "necessary in the interest of national security."<sup>64</sup>

NSC responded as follows:

We are not aware of any national security considerations that would warrant the Secretary of

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<sup>63</sup> July 17, 1995 DOD Letter.

Memorandum from David A. Balton, DOS, to Pamela Lawrence, NOAA, May 9, 1995.

Commerce overriding the decision of the Puerto Rico Planning Board to reject appellant's proposal to develop a shrimp farm in Puerto Rico.<sup>65</sup>

The other federal agencies had no comment on whether this project was necessary in the interest of national security.

The comments in the administrative record lead me to conclude that no national defense or other national security interest will be significantly impaired if Appellant is not allowed to proceed with its proposed activity. Therefore, based on the record before me, I now find that the requirements for Ground II have not been met. Accordingly, I do not override PRPB's objection based on Ground II.

#### VIII. Conclusion

Because Appellant has satisfied neither Ground I nor Ground II of the statutory and regulatory requirements for an override of the Commonwealth of Puerto Rico's consistency objection, I decline to override that objection.



Secretary of Commerce

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<sup>65</sup> Letter from Alan Kreczko, Special Assistant to the President and Legal Adviser, NSC, to Diana Josephson, Deputy Under Secretary for Oceans and Atmosphere, Department of Commerce, Washington, D.C. 20230, May 16, 1995.